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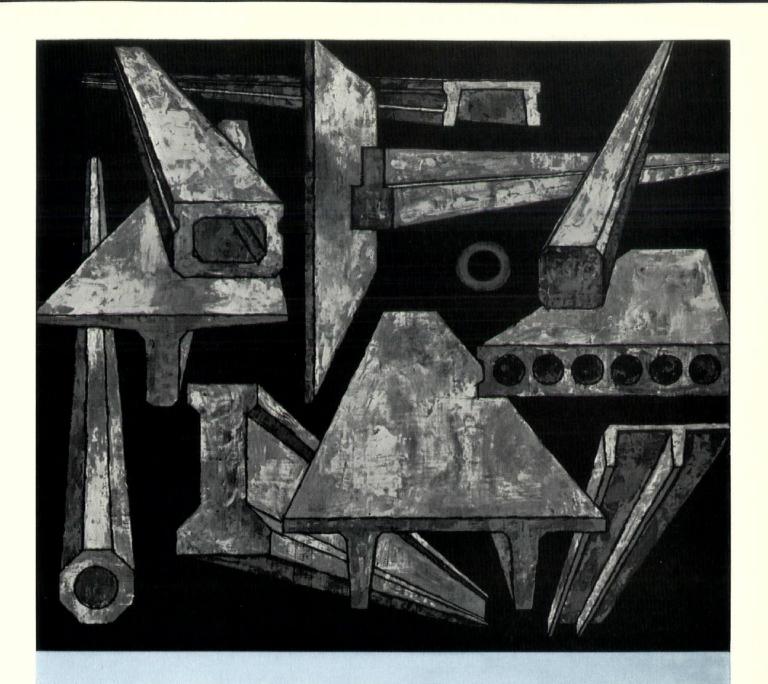
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Reviewed after one year's operation, this large project, locally owned, designed and built, is successful in its operational functions. Aesthetically it has settled comfortably with its neighbors on North Water Street.

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The Juilliard School of Music, the last stage of New York's Lincoln Center for the Performing Arts, was completed in September of this year. In view of the similarity in the basic requirements of the Juilliard School and the Milwaukee Performing Arts Center, we found it interesting as a follow up.

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Dean Wade explains his program that may give the appearance of permissiveness but is in fact more strict than conventional programs.

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Wisconsin Architects Foundation Executive Secretary, Dorothy Schweitzer, reports on Books for the School of Architecture, early gifts and contributions and on former students.

M&I Bank Building Photos by Ferdebar Studios



Another keystone in the redevelopment of Milwaukee's downtown is the new home of the Marshall & Ilsley Bank which went into full operation in January of this year.

Rising 21 stories above North Water Street, the new building, monumental in scope yet selfcontained and quiet in its expression has added another dimension to Milwaukee's silhouette.

The eleven million dollar project is a welcome documentation of communal recognition at home, an otherwise rarely exercised opportunity of acknowledgment and recognition of the fine talent and the capabilities we find right here.

The M. & I. Bank is a model case for the belief that architects are generalists. Before the excavations started, five years of work — research, planning, search for alternatives, countless meetings and consultations — were spent by Grassold, Johnson, Wagner and Isley before finalizing the design concept that embraced all the requirements and considerations fitting the site and the functions of this large project.

The basic requirement of the owner was a building that would hold parking and drive-in banking facilities combined with a connecting unit to a bank and office tower. Beyond that, the owner wanted a North Water Street identity for the building, first floor banking lobby and flexibility for the office areas to be rented. The Marshall & Ilsley Bank executives desired a fine working environment for their employees and a simple, distinctive exterior with a minimum of color and materials.

If these requirements sound simple enough, the achievement of this skyscraper involved complex studies by the architects beginning with the location, functions and their interrelationships, parking, service docks, location of elevators and special equipments. Expert consultants for the parking structure, elevator location, the structural elements of the building and the bank equipment were conferred with and their findings incorporated into the final design scheme the architects developed over a period of three years.

This scheme has public parking entering off Broadway. the bank customer parking entering off the alley between Wells and Mason Streets and the drive-in banking functioning off North Water Street. From the parking building with open air space for 381 cars, a heated garage for 40 cars, the drive-in Banking facility, walk-up facilities and a fallout shelter, people are brought down to the main floor lobby of the Bank and Office Tower with the connecting building elevators. From the lobby one can either proceed down to the lower lobby containing the Bank vault and safe deposit, or up into the banking and office rental floors. In the main lobby, the banking area is completely open space with the elevator core on one end adjacent to the connecting building. The bank and office tower floors above the main lobby also have the elevator core on one end, making the areas flexible for various layouts. The architects omitted at the first floor one row of columns to create the spacious banking lobby the owner required.

Four 55 foot steel trusses were installed in the second floor space to carry the column load of 20 floors above. These giant open-web trusses are 11 feet high and frabricated of welded steel plate. They interfere little with the office space since they occur mostly in a mechanical equipment room.

Marshall & Ilsley Bank Building

Architect: Grassold, Johnson, Wagner & Isley

Project Designer: Kenneth Prengel
Project Manager: John M. Flom

Owner: Marshall & Ilsley Bank

General Contractor: Hunzinger Construction Company

Consultants:

Heating, Ventilating

and Air Conditioning: Lofte & Fredericksen

Electrical: Ray Eigner

Structural: Amman & Whitney
Plumbing: Lubenow & Gobster

The Marshall & Ilsley Bank occupies the first ten floors of the office tower, the following nine are rented to tenants. The remaining two floors at the top house the mechanical equipment for aesthtical purposes and ease of planning. The service area to the building, including the Brink's Security trucks, is located off the alley behind the office tower.

The statistics of the building are an indication of the vast scope of this project. The Tower Building is 183 ft. x 83 ft. frame in plan x 277 ft. high containing 358,400 sq. ft. gross floor area. The structural steel frame weighs 3,750 tons, the bank vault weighs 3,000 tons empty; the vault floor area contains 5,750 sq. ft. The estimated concrete quantity comes to 18,200 cubic yards. Its foundation needed 712 concrete filled steel pipe bearing piles with a capacity of 60 tons each, at approximately 50 ft. depth.

The adjacent parking building has a dimension of 254 ft. x 120 ft. It contains 7 floors with a gross floor area of 217,700 sq. ft. and is of reinforced concrete cast-in-place structure. The total area of the site is 57,600 sq. ft. without the mall in former Market Street.

There are six customer TV stations in the drive-in bank and six others located in three widely separated "walk-up banking" units. Closed circuit television and pneumatic tubes are utilized for banking transactions with tellers remotely located in a security area near the vault. This system provides maximum security for currency, convenient access for customers and freedom to extend banking hours beyond those of the bank's main facilities.

Important as the functional provisions are to the success of a building as its *raison d'etre*, equally important are its aesthetics, for it is customary that buildings are generally judged by the layman for appearance only and not as a complete entity.

The Marshall & Ilsley Bank and Parking Structure are two separate volumes, contrasting in proportion but being unified through vertical assents in design, details and material with the connecting unit serving as a transitional element between the two. The exterior is dominated by two main colors, the dark bronze tinted glass of the 1553 windows and the warm buff tone of the precast concrete fins, evenly spaced and extending from ground to rooftop in unbroken lines. Contrary to the narrow appearance of the windows from the street, they are actually three feet wide and offer a wide angle of view between the precast fins from the inside. The window sashes are of bronze anodic aluminum blending

with the dark brown brick and opalescent granite into a subdued but rich color scheme.

The precast concrete fins have a notch detail that adds a fine scaleto the vertical rhythm of the exterior. Depending from the angle of vision, the fins seem to form a monolithic wall. Light bronze cast aluminum canopies serve as a transitional feature and accent the entrances.

The Banking Lobby has precast marble tile floor with walls of beautifully matched travertine marble in shades of beige to deep brown. Between vertical marble shafts, walnut wood screens complement these walls. These screens have the same vertical emphasis as the exterior design and they are repeated in the Lower Lobby, the third floor cafeteria and the Main Lobby desks. The Main Lobby is designed beautifully spacious with an atmosphere of understated elegance. Custom designed bronze clocks, exquisitely designed contemporary drinking fountains and the choice

of colors and materials attest to the thoughtful care of detail the architects exercised throughout the building inside out. Anodic bronze rolling grilles from the ceiling can separate the Main Lobby banking area from the Office Lobby function.

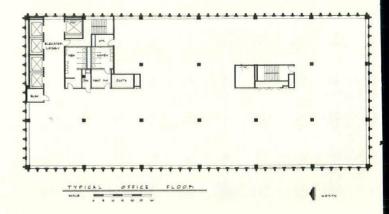
The interior design of the Office Tower and the Banking area is contemporary with the exception of the executive floor which is designed in the early American style.

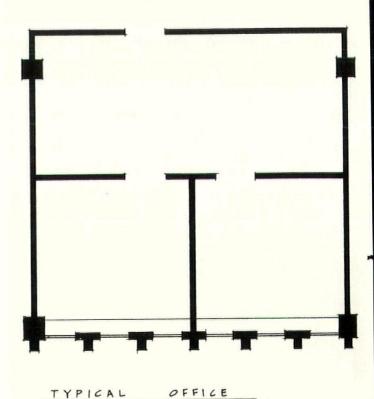
Grassold, Johnson, Wagner and Isley designed a strong, simple and straightforward building that contrasts with its venerable neighbor, Old City Hall to the north and yet is surprisingly compatible with it and the other adjacent buildings on North Water Street.

After a year's operation with full occupancy even before the structure was ready, everybody seems to be happy with its function and aesthetically it has been accepted into the community with the greatest of ease.

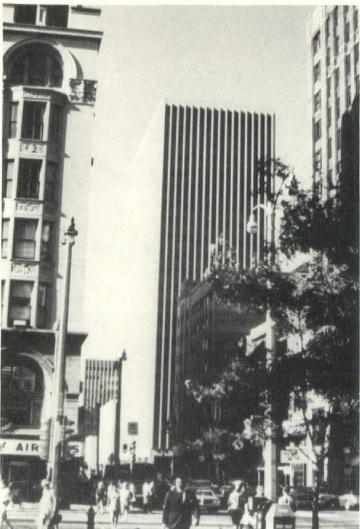




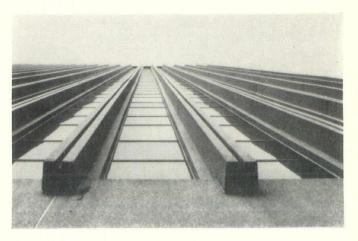












wisconsin architect/december, 1969





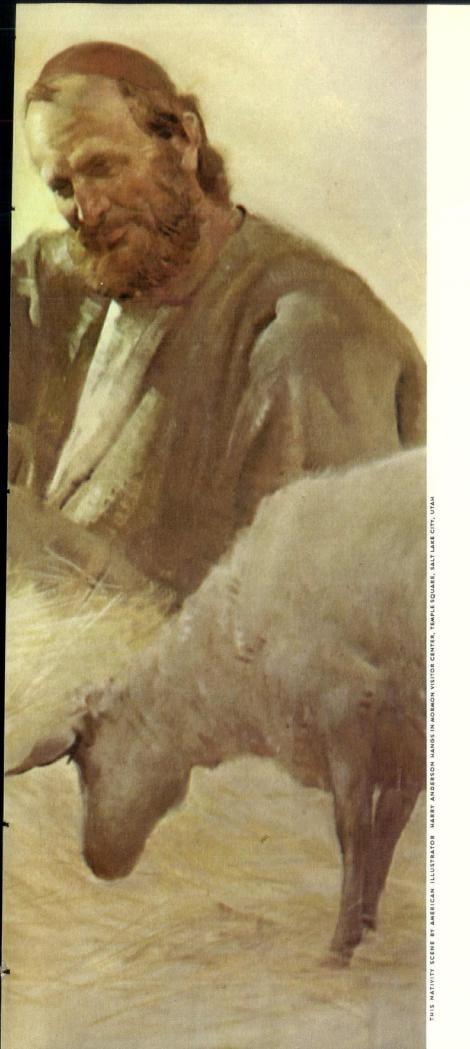












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The Juilliard School

Photos by Ezra Stoller

Ceremonies marking the opening of The Juilliard School and the completion of the construction of Lincoln Center for the Performing Arts took place on Sunday, October 26, 1969, in New York.

The Juilliard School building is located to the north of the main plazas of Lincoln Center and is connected to the North plaza by a bridge passing over 65th Street and then either into the building itself, or down a monumental stairway to Broadway.

Designed by Pietro Belluschi and his associate architects, Eduardo Catalano and Helge Westermann, the building is sheathed in Roman travertine marble donated by the Republic of Italy.

Extending for a distance of 350 feet along 65th and 66th Streets and 200 feet on Broadway, it includes four stories below street level and six (not including the mechanical equipment penthouse) above. The building contains approximately 500,000 square feet and 8,000,000 cubic feet of space. Total cost including furnishings is \$29,500,000.

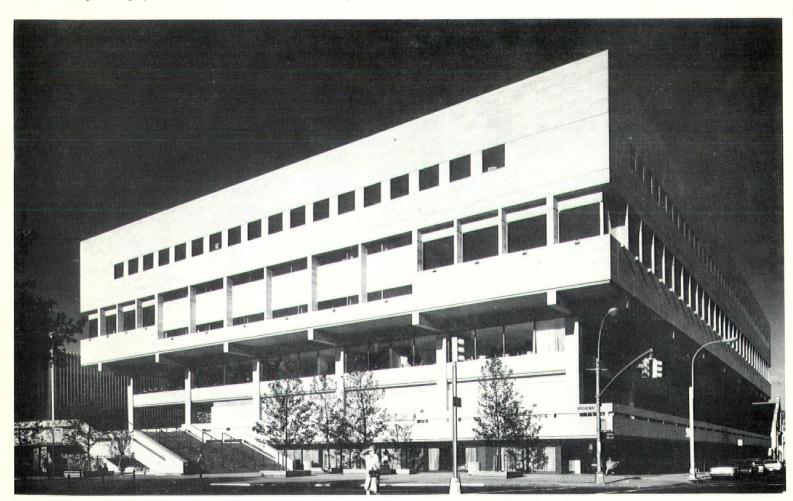
This building has been described as combining an entire campus in an urban setting, for it contains a wide variety of instructional and performance facilities in one integrated structure. Moreover, it reflects a unique Juilliard educational philosophy in which the functions of training

for performance and performance itself are inextricably interrelated.

Only a cooperative effort, headed by the architects, including a variety of specialized consultants and engineers, and guided by representatives of The Juilliard School, could have achieved the successful resolution of all the functional requirements in a practical architectural design and structure. The result is a thoroughly unique building, integrating into a coherent whole four specialized performance halls, instructional facilities for Music, Dance and Drama, a library, and supporting administrative, workshop, and mechanical services. All are related to one another in an educationally relevant manner and provide a physical environment conducive to the development of artistic talent.

Understandably, the design of this building raised special problems that required careful consideration.

In the realm of acoustics, this building required special attention to the acoustics of auditoriums and to room abience in general. Under the direction of Heinrich Keilholz a variety of acoustic criteria were developed and incorporated into design and engineering. These include the construction in all teaching and performance areas of floors and walls that "float" free of the structure to minimize transmission



View of The Juilliard School, looking southeast, showing the Broadway entrance to the school.

of sound through the building itself. Similarly special requirements were imposed on the air handling system, both to obtain quiet movement of air and to prevent sound being carried through the ducts themselves. Acoustic concern was also directed to the creation in studios and classrooms of an agreeable aural environment for creative instruction and learning.

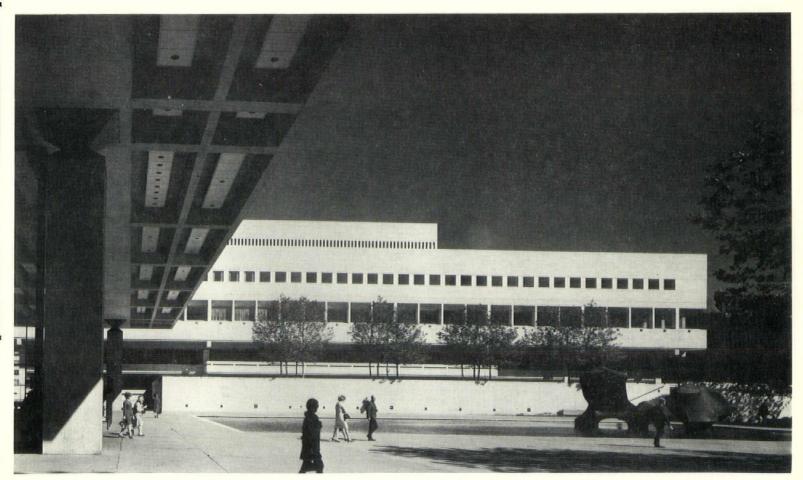
Of all the special considerations this building contains, we concentrate for space reasons only on the auditorium. It accommodates 960 in its main floor and an additional 66 seats can be placed in the orchestra pit area for drama staged behind the proscenium.

The walls and ceiling of the Juilliard Theater are of basswood and cherry, detailed to achieve maximum acoustic benefits. The entire auditorium is dominated by sweeping curved shapes in the walls, ceiling and even in the slope of the main seating floor. The "rake" of the latter assured exceptionally good sight lines, with all seating giving the impression of intimacy.

There is no fixed frame for the stage opening, the shape of the proscenium being determined by the vertical height of the moveable ceiling and by the location of adjustable side panels that continue the curve of the side walls down onto the forestage. A unique feature is its moveable ceiling, whereby 60% of the entire ceiling can be raised or lowered 7 feet to permit acoustic adjustment. Thus the auditorium can be "tuned" for such varied conditions as spoken drama, intimate opera or grand opera. Weighing 1,900 tons, designed by Olaf Soöt, this ceiling consists of steel trusses supported on four screw jacks that operate electrically to raise or lower the ceiling. The steel framework is covered with the wood panels visible from the audience. Within the entire structure is accommodated a part of the complete stage lighting system of the theater.

If so desired, the orchestra pit can accommodate a full 95 piece opera orchestra. Equipped with two lifts, both capable of reaching stage level, its size can be reduced by half for more intimate operas. When the pit lifts are raised to stage level, they proved an extensive forestage for drama productions. Wood paneling with architectural detailing was used extensively, achieving in contemporary terms the acoustical warmth and diffusion otherwise characteristic of baroque decor.

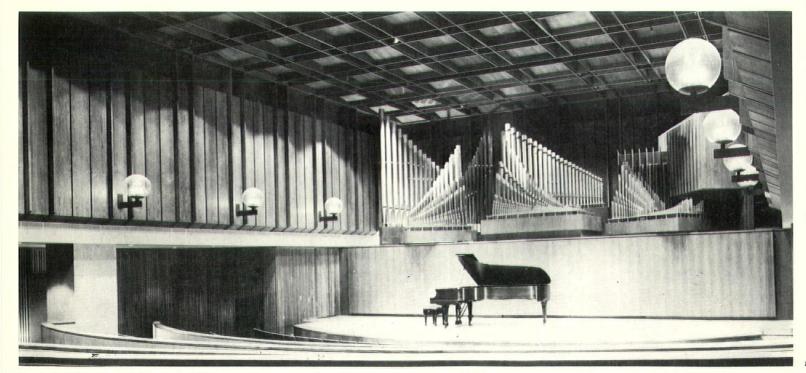
The Juilliard School is of straightforward design expressing strength, infinite care in detail, thoroughly contemporary.



The Juilliard School, looking north across the reflecting pool, at Lincoln Center for the Performing Arts. The main entrance to the Vivian Beaumont Theater appears in left foreground.

Plan: Street (S) Level — Elevation 72'0 — Drawing by Erwin Feher

- 1. The Juilliard Theater
- 2. The Juilliard Theater Stage House
- 3. The Juilliard Theater Lobby
- 4. Alice Tully Hall
- 5. Alice Tully Hall Lobby
- 6. Main Vestibule (south side)
- 7. The Juilliard School Lobby
- 8. Entrance from West 66th Street (north)
- 9. Loading Dock
- 10. Entrance from West 65th Street (south)
- 11. Entrance to Alice Tully Hall from Broadway
- 12. Alice Tully Hall Box Office
- 13. Alice Tully Hall Offices
- 14. Promenade Staircase (leading from Broadway)



Recital Hall containing the Holtkamp Organ, seating 277.

West-East Section (Composite) - Drawing by Erwin Feher

JT	The Juilliard Theater
D	Drama Workshop
C	Open Court

S Scenery Workshop JL Juilliard Lobby

P Paul Recital Hall

O Orchestra Rehearsal and Recording Studio

L Lila Acheson Wallace Library

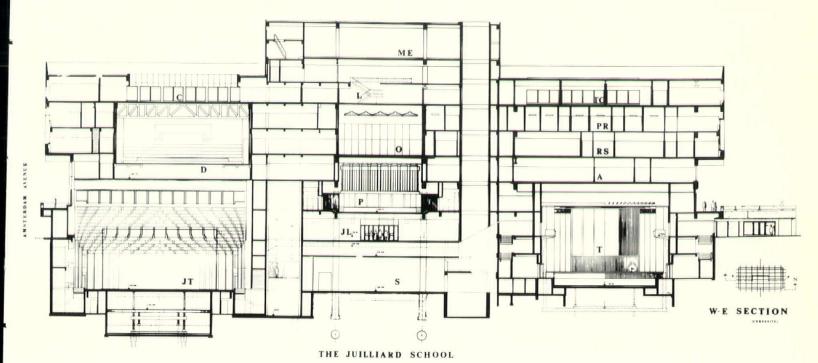
ME Mechanical Equipment
T Alice Tully Hall

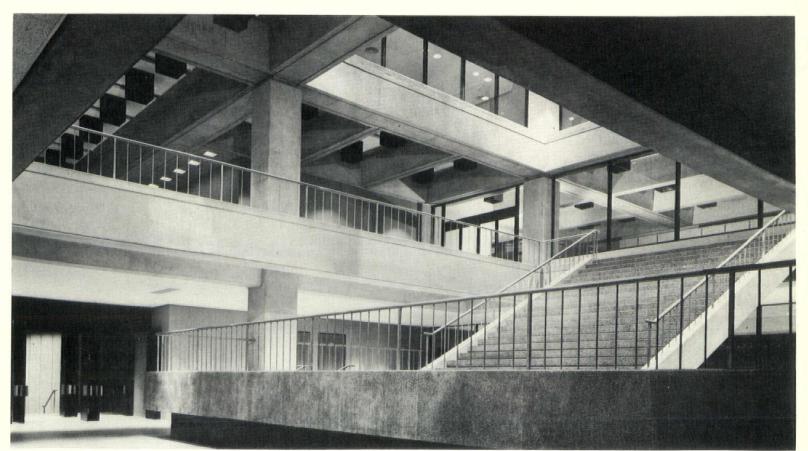
A Administrative Level (Floor 2)

RS Large Rehearsal Studio Level (Floor 3)

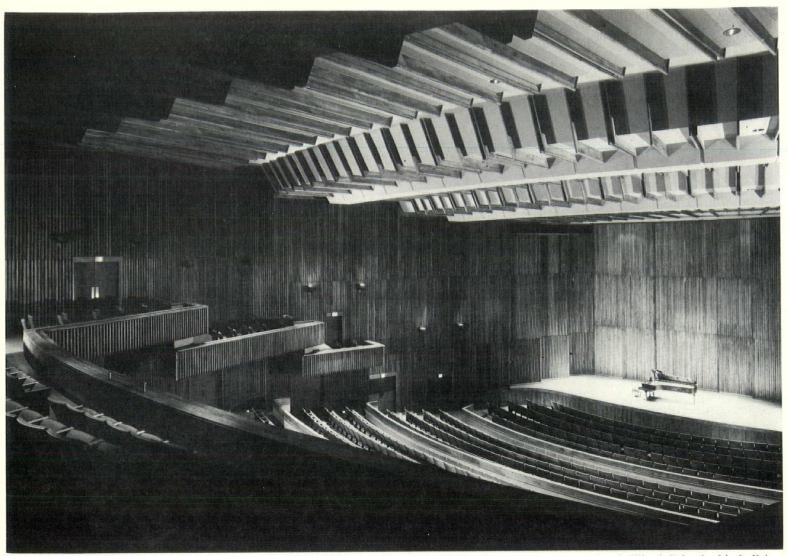
PR Practice Room Level (Floor 4)

TC Teaching Studio and Classroom Level (Floor 5)

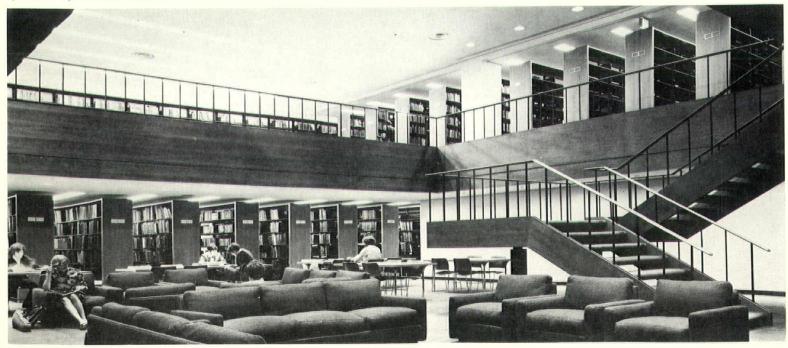




The 65th Street lobby entrance of The Juilliard School.



Auditorium, named for its principal donor, Miss Alice Tully, seating 1,096. Although located within The Juilliard School, this hall is operated by Lincoln Center.



View of the Library.

The Juilliard School

Owner: Lincoln Center for the Performing

Arts, Inc.

Constituent Institution: The Juilliard School

Architect: Pietro Belluschi

Associates: Eduardo Catalano and Helge

Westermann

Lincoln Center Col. Clyde F. Townsend, Col.

Construction: William F. Powers

Juilliard Planning Liaison: Philip Hart

General Contractor: Walsh Construction Company

Theatrical, Lighting and

Audio Consultant: Jean Rosenthal Associates, Inc.

Acoustical Consultant: Heinrich Keilholz

Structural Engineer: Paul Weidlinger

Mechanical and Electrical

Engineers: Jaros, Baum and Bolles

Moveable Facilities

Engineer: Olaf Soöt

Theater Consultant

to Lincoln Center: Robert P. Brannigan



Auditorium of The Juilliard School, seating 1,026, is designed for opera, drama and dance productions.

"Permissiveness" in Architectural Education

The newly opened School of Architecture at UWM has what appears to be a highly permissive program in architecture. First appearances, however, are highly deceiving and the program in many ways is more strict and more rigorous than conventional architectural school programs.

Several features of the program give the *appearance* of permissiveness. Among these are the lack of a prescribed list of courses prerequisite for entry to the School at the Junior level, the decision not to give examinations or grades upon classwork from the Junior level onward, and the intention to permit a student to organize his own program of studies at the graduate level.

I shall discuss each of these in turn, but a first introductory statement of teaching philosophy will be helpful in understanding each part of the program.

In any school that attempts to teach professional practice, the school must assume a high degree of motivation on the part of its students. Such a school is not dealing with time-serving students — those who are required by law or parents to attend and are satisfying program requirements only in order to "get through." A professional school must assume high motivation on the part of its students, and indeed, high motivation or its absence must be one device by which its graduates are selected. Professional practice is so arduous and public responsibilities so grave that the student must want very much to enter that profession in order to be permitted to do so. For that reason alone, a faculty must not be under an obligation to force students to their tasks, but must wait to see whether students undertake such responsibility themselves.

In addition to the use of self-motivation as a selection device, sound educational theory, proved in use, recommends that the teacher never do for the student what he can do for himself. Such doing is the basic learning experience at whatever age and at whatever level of complexity or sophistication — whether it be a child learning to dress himself or a college graduate student learning to develop a computer program.

With these thoughts in mind, let us see how the organization of the curriculum of the School of Architecture at UWM applies these principles.

Consider first the lack of prerequisite courses. For the Freshman and Sophomore years, there are no *required* courses. The student, however, is told, first, that he has an obligation to acquire the information and skills implied by a list of courses that include advanced English composition, mathematics through statistics and elementary calculus, logic, and introduction to computer use, second, that he must acquire as *broad* a knowledge as possible, and third, that he must discover what areas of knowledge are of special interest to him.

The student is told about this through printed material, through information supplied in an orientation course taught for Freshmen and Sophomores and by ready availability of counselling by members of the architecture faculty.

We believe that by asking the student to acquire the information and skills rather than course credits, that he is made aware of the importance of the material to his later work. Also, the faculty develops a first sense of the student's strength of motivation. A first year's experience would indicate that very few students entering the School have failed to acquire all the recommended courses. Future experience must confirm whether we gain the extra advantage of higher retention of information and skills — it is highly likely that we shall.

Also, through counselling, the student is helped (where he desires help) in building a balanced two-year pre-architecture program. It is the belief of our faculty that the student must have a broad collegiate experience in the sciences, in the humanities, and in fine arts, and social studies. Without such a balanced base, the typical student cannot build a successful career. There are, however, exceptions — exceptional talents, exceptional interests, and exceptional deficiencies. Our program is arranged to permit such exceptions to occur so that each student and each graduate can bring his best combination of abilities to a complex profession that requires a wide diversity of talents.

Upon the students entry into the architectural program at the Junior level, the program is divided into two parts that go on continuously and simultaneously. One part is a flow of information and skills instruction from the faculty to the student—the other is an application of information and skills by students to specified problem situations taken from the real world. On the one hand, faculty input; on the other hand, student output. It is our plan not to evaluate students acquisition of information and skills in isolation; i.e., not to grade by conventional examination on course subject matter; instead, our plan is to evaluate student performance as he brings information and skills to bear upon the architectural problems that he undertakes. Grades are a form of student reward, and we intend to reward organization, integration, and application of knowledge and skills, instead of their simple acquisition. The faculty came to this approach since all its members had experienced architectural curricula where students learned to undertake structural design, mechanical equipment design and the like, but where the student was never required to apply what he had learned to the design of buildings. Needless to say, ours is a more difficult and demanding discipline for the student (and for the faculty) and only those who are strongly motivated can forego the reward of grades on each input portion of their program. The student will be helped in this, since each instructional input sequence will have a carefully described "performance" objective — the student will be told what knowledge and skill he should have acquired at the completion of each input component of the program. He can thus evaluate himself, and can obtain faculty evaluation if he wishes to have it.

Finally, the third permissive aspect of the curriculum is tied to the changing nature of architecture and to the need for a wider variety of persons and skills in architectural practice. At the graduate level, we expect to permit a student to develop his own program of study with faculty counselling and only upon faculty approval. A standard sequence of study will be offered, but for the student who has discovered special or strong interest areas or strong talents that he wishes to develop, he will be helped to develop a program serving those interests and developing those talents. The faculty has taken the assumption that many varieties of knowledge and skill are useful in the expanding field of architecture and that the profession would be severely hampered by restricting entry only to those with the traditional distribution of knowledge and skills.

In summary, what appears on the face to be a permissively organized educational process, is at the same time, a rigorously demanding professional education program. The program is not organized by any foolish set of beliefs about young people simply "doing their own thing" for its own sake. Instead, our program is logically conceived in terms of educational rewards, professional rigour, and based upon the established fact that self-motivation is the only effective motivation for learning.

Dean John W. Wade

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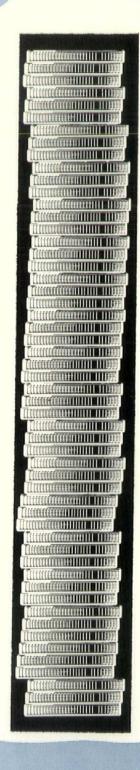
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By Dorothy Schweitzer, Executive Secretary

Books for The School of Architecture

All Chapter members and their firms are hereby advised that the central library at the University of Wisconsin-Milwaukee is currently accepting books for the new School of Architecture. Gifts of books intended for the new School are to be shipped or delivered to the UWM central library where they will be cross card cataloged, for the School and for the central library. Only duplicate copies will be sent to the School (temporarily located at the downtown campus), the one-of-a-kind will be retained at UWM library for the usual checkout privilege, the architectural students having to go there for books shown in their school's card index.

Contributions will be acknowledged by the UWM central library. The donor will be thanked by letter, together with a listing of the books received with estimated valuations noted, maybe not for every item but for those of value. The total may be used as a tax deduction. The donor may, at his discretion, arrange for his own valuation for tax purposes. All books conveyed must be accompanied by a list, as well as full identification and address of donor.

Foundation Book Plate

In the process of cross-indexing, UWM central library will paste into the front cover of each volume a book plate furnished by the Foundation, inserting the name of the donor and the year by typewriter. A reproduction of the book plate will be published on this page next month.

SOA Library

The School of Architecture's own library contains books ordered by the Dean and his staff for their teaching use. The procurer of those books, Mr. Richard Loreck, whose formal title is Assistant Director for Collections Development, informed the executive secretary of the Foundation that since July 1, 1969, a total of \$11,830.22, to that particular day, had been spent for the purpose, all books having been ordered in duplicate as explained above. From time to time other books for SOA (School of Architecture) will be purchased under the librarian's discretionary budget.

New, Old and Rare Books

Mr. Loreck was kind enough to show the secretary around the beautiful new library (Architect: Fitzhugh Scott, a Director of the Foundation), pointing out the fine accumulation of architectural books already owned, coming from three sources: Those culled from the library generally; duplicates of books ordered by the SOA, and gifts. The secretary also was shown the rare book section where large, obviously valuable, books and plates, shelved in flat position, are very closely guarded by Professor Donald Woods, the curator. Thought of Jack Benny's vault came on impulse.

Armand Koch Collection

Mr. Loreck advised that probably the most valuable collection of architectural books they have received to date came in 1966 when Gustave A. Elgeti of Pewaukee, a former employee of the renowned architect Armand Koch, donated

the architect's library which had been willed originally to him. While a value of \$5,000 was put on the collection, some of the books are actually priceless because of their rarity. Some of the Milwaukee architects might recall that Mr. Koch's most significant work is Milwaukee's famous landmark, City Hall.

Early Gifts

Accumulated over a period of years in the vault of Herbst, Jacoby & Herbst were books and periodicals contributed for the future School of Architecture from two estates, namely Elliott B. Mason, AIA, and Cornelius Leenhouts, AIA. Also there was an assortment of books contributed hopefully back in 1963 by Joseph J. Weiler, AIA, of Madison. These collections are being turned over to UWM and they will be the first to bear the book plate of the Foundation. Other books for the new School, as well as publications, both bound and not bound, were presented some time ago to UWM, notably the fine collection of Thomas L. Rose, AIA, the father of Francis J. Rose, AIA, and the Eschweiler firm. Mark A. Pfaller, AIA, and Reimar Frank, AIA, gave publications. This list might be longer, but the secretary has not been informed.

Any questions concerning conveying of books, plates, and magazines to UWM should be sent to the Foundation, as well as notification of intention. It is suggested that thought be given to future bequests.

As to gifts of slides, Dean John W. Wade should be consulted directly. His address: SOA, UWM, 623 West State Street, Milwaukee 53201.

Former Student

Another former student has been added to the list of those who are voluntarily reimbursing the Foundation for tuition grants received in the past. Gene Maloney, of Manitowoc, began recently with a check for \$200 to repay the \$800 in tuition aid he received during 1960-62 while studying architecture at Illinois Institute of Technology. Mr. Maloney is employed by the firm of Raeuber-Petri-Stark, Manitowoc.

Contribution

Wisconsin Education Association, \$50.

(Fee for an address by Frederick J. Schweitzer, AIA, made at the Association's 1969 Convention on the need of accommodations for the physically handicapped in all public buildings.)

Note to Chapter Members: Fees for speaking engagements are a good source of income for the Foundation. Therefore, kindly do not decline such fees, as a sense of modesty, but, rather, ask that check be made payable to Wisconsin Architects Foundation. In the above instance, the fee was actually increased because of the worthwhile program of the Foundation.

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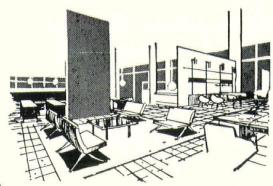
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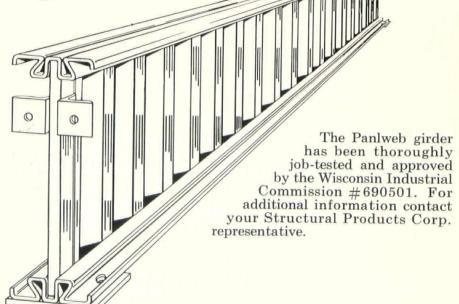
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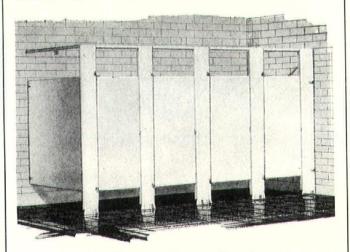
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